

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Continuation application of  
LUDWIG, Lester F., et al.

Docket No: A8680

Appln. No.: Unknown

Group Art Unit: 2153

Confirmation No.: 3630

Examiner: Unknown

Filed: November 26, 2003

For: METHOD FOR REAL-TIME COMMUNICATION BETWEEN PLURAL USERS

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §§ 1.97 and 1.98**

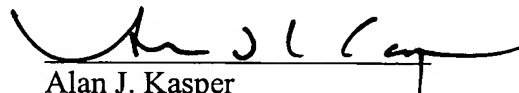
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 CFR §1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form which are all the references of record in parent application No. 09/702,737. Applicant is not submitting duplicate copies of these references but requests that they be listed on the face of any patent granted on the above application. (See 37 CFR §1.98(d)). Copies of any cited copending applications, if not previously submitted, are being submitted herewith.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

Respectfully submitted,

  
Alan J. Kasper  
Registration No. 25,426

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: November 26, 2003

|  |  |   |          |  |       |                                |                              |
|--|--|---|----------|--|-------|--------------------------------|------------------------------|
| <b>Form PTO-1449</b><br>(Rev. 2-32)  |  | <b>U.S. Department of Commerce</b><br><b>Patent &amp; Trademark Office</b>  |          | Atty. Docket No.<br>A8630              |       | Serial N .<br>Not Yet Assigned |                              |
| <b>INFORMATION DISCLOSURE STATEMENT</b><br>(Use several sheets if necessary)   |  |   |          | Applicant:<br>Lester F. LUDWIG, et al. |       |                                |                              |
|  |  |   |          | Filing Date:<br>November 1, 2000       |       | Group:<br>Not Yet Assigned     |                              |
| <b>U.S. PATENT DOCUMENTS</b>   |  |   |          |  |       |                                |                              |
| Examiner Initial   |  | Document Number   | Date     | Name                                   | Class | Sub-Class                      | Filing Date (if appropriate) |
|  |  | 3,723,653   | 3/27/73  | Tatsuzawa                              |       |                                |                              |
|  |  | 3,873,771   | 3/25/75  | Kleinerman et al.                      |       |                                |                              |
|  |  | 3,974,337   | 8/10/76  | Tatsuzawa                              |       |                                |                              |
|  |  | 4,005,265   | 1/25/77  | Verhoeckx, et al.                      |       |                                |                              |
|  |  | 4,054,908   | 10/18/77 | Poirier et al.                         |       |                                |                              |
|  |  | 4,210,927   | 7/1/80   | Yumde, et al.                          |       |                                |                              |
|  |  | 4,441,180   | 4/3/84   | Schussler, et al.                      |       |                                |                              |
|  |  | 4,451,705   | 5/29/84  | Burke et al.                           |       |                                |                              |
|  |  | 4,475,193   | 10/2/84  | Brown                                  |       |                                |                              |
|  |  | 4,516,156   | 5/7/85   | Fabris, et al.                         |       |                                |                              |
|  |  | 4,529,839   | 7/16/85  | Colton, et al.                         |       |                                |                              |
|  |  | 4,529,840   | 7/16/85  | Colton et al.                          |       |                                |                              |
|  |  | 4,531,024   | 7/23/85  | Colton, et al.                         |       |                                |                              |
|  |  | 4,574,374   | 3/4/86   | Scordo                                 |       |                                |                              |
|  |  | 4,645,872   | 2/4/87   | Pressman, et al.                       |       |                                |                              |
| <b>FOREIGN PATENT DOCUMENTS</b>  |  |   |          |  |       |                                |                              |
|  |  | Document  | Date     | Country                                | Class | Sub-class                      | Translation Yes/No           |
|  |  | 0 041 902   | 12/16/81 | EP                                     |       |                                |                              |
|  |  | 0 190 060   | 8/6/86   | EP                                     |       |                                |                              |
|  |  | 0 354 370   | 2/14/90  | EP                                     |       |                                |                              |
|  |  | 35 07 152   | 8/29/85  | DE                                     |       |                                |                              |
|  |  | 0 403 118   | 12/19/90 | EP                                     |       |                                |                              |
|  |  | 0 414 222   | 2/27/91  | EP                                     |       |                                |                              |
|  |  | 0 436 345   | 7/10/91  | EP                                     |       |                                |                              |
|  |  | 0 453 128   | 10/23/91 | EP                                     |       |                                |                              |
|  |  | 0 497 022   | 8/5/92   | EP                                     |       |                                |                              |
|  |  | 0 516 371   | 12/2/92  | EP                                     |       |                                |                              |
| <b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>  |  |   |          |  |       |                                |                              |
|  |  | Videomatic Switching: Systems and Services, C. Crawford, F. Milone, D. Zoppellaro, Digital Communications, 1988 International Zurich Seminar.   |          |  |       |                                |                              |
|  |  | Marskak, Ronni T. "Beyond Mail for Windows - epitomizing the mail-enabled application", Patricia Seybold's Office Computing Report, Sept. 1992 v15 n9. (full text copy from Computer Select 1992 CD). |          |  |       |                                |                              |
|  |  | Rangan et al. "Software Architecture for Integration of Video Services in the Etherphone System," IEEE Journal on Selected Area of Communications, v9 n9, Dec. 1991, pp. 1395-1404.                   |          |  |       |                                |                              |
|  |  | ACM Press, Conference on Organizational Computing Systems, SIGOIS Bulletin, Vol. 12, No. 2-3, Nov. 5-8, 1991.   |          |  |       |                                |                              |
|  |  | The American Users Forum (Niu-Forum) Aug 6-9, 1990.   |          |  |       |                                |                              |
| EXAMINER:  |  |   |          | DATE CONSIDERED:                       |       |                                |                              |
| EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication. |  |   |          |  |       |                                |                              |

|   |  |   |          |   |       |                                       |                                 |
|---|--|---|----------|---|-------|---------------------------------------|---------------------------------|
| <b>Form PTO-1449</b><br>(Rev. 2-32)   |  | <b>U.S. Department of Commerce</b><br><b>Patent &amp; Trademark Office</b>  |          | <b>Atty. Docket No.</b><br>A8680              |       | <b>Serial No.</b><br>Not Yet Assigned |                                 |
| <b>INFORMATION DISCLOSURE STATEMENT</b><br>(Use several sheets if necessary)  |  |   |          | <b>Applicant:</b><br>Lester F. LUDWIG, et al. |       |                                       |                                 |
|   |  |   |          | <b>Filing Date:</b><br>November 1, 2000       |       | <b>Group:</b><br>Not Yet Assigned     |                                 |
| <b>U.S. PATENT DOCUMENTS</b>  |  |   |          |   |       |                                       |                                 |
| Examiner<br>Initial   |  | Document Number   | Date     | Name  | Class | Sub-<br>Class                         | Filing Date<br>(if appropriate) |
|   |  | 4,650,929   | 3/17/87  | Boerger et al.                                |       |                                       |                                 |
|   |  | 4,653,090   | 3/24/87  | Hayden  |       |                                       |                                 |
|   |  | 4,686,698   | 8/11/87  | Tompkins et al.                               |       |                                       |                                 |
|   |  | 4,710,917   | 12/1/87  | Tomkins, et al.                               |       |                                       |                                 |
|   |  | 4,716,585   | 12/29/87 | Tompkins et al.                               |       |                                       |                                 |
|   |  | 4,796,293   | 1/3/89   | Blinken et al.                                |       |                                       |                                 |
|   |  | 4,817,018   | 3/28/89  | Cree et al.                                   |       |                                       |                                 |
|   |  | 4,837,798   | 6/6/89   | Cohen, et al.                                 |       |                                       |                                 |
|   |  | 4,847,829   | 7/11/89  | Tompkins et al.                               |       |                                       |                                 |
|   |  | 4,888,795   | 12/19/89 | Ando et al.                                   |       |                                       |                                 |
|   |  | 4,922,523   | 5/1/90   | Hashimoto                                     |       |                                       |                                 |
|   |  | 4,931,872   | 6/5/90   | Stoddard et al.                               |       |                                       |                                 |
|   |  | 4,953,159   | 8/28/90  | Hayden et al.                                 |       |                                       |                                 |
|   |  | 4,961,211   | 10/2/90  | Tsugane, et al.                               |       |                                       |                                 |
|   |  | 4,965,819   | 10/23/90 | Kannes  |       |                                       |                                 |
| <b>FOREIGN PATENT DOCUMENTS</b>   |  |   |          |   |       |                                       |                                 |
|   |  | Document  | Date     | Country                                       | Class | Sub-<br>class                         | Translation<br>Yes/No           |
|   |  | 0 523 618   | 1/20/93  | EP  |       |                                       |                                 |
|   |  | 0 535 601   | 4/7/93   | EP  |       |                                       |                                 |
|   |  | 0 523 626   | 1/20/93  | EP  |       |                                       |                                 |
|   |  | 0 548 597   | 6/30/93  | EP  |       |                                       |                                 |
|   |  | 0 561 381   | 9/22/93  | EP  |       |                                       |                                 |
|   |  | 0 604 053   | 6/29/94  | EP  |       |                                       |                                 |
|   |  | WO 94/24803   | 10/27/94 | PCT   |       |                                       |                                 |
|   |  | WO 92/21211   | 11/26/92 | PCT   |       |                                       |                                 |
| <b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>   |  |   |          |   |       |                                       |                                 |
|   |  | Bellcore News, "IMAL Makes Media Merging Magic," 5(20), Nov. 9, 1988.   |          |   |       |                                       |                                 |
|   |  | Frontiers in computer communications technology, Sigcom '87 Workshop (Aug. 11-13, 1987)   |          |   |       |                                       |                                 |
|   |  | Unix 4 <sup>th</sup> Berkeley Release 1991 man pages for 'login,' 'http,' 'talk,' and 'who.' Online Internet: <a href="http://www.de.freebds.org">http://www.de.freebds.org</a> . |          |   |       |                                       |                                 |
|   |  | Statement by Attorney for Applicants-Describing Product Development.  |          |   |       |                                       |                                 |
|   |  | AHUJA et al., "Coordination and Control of Multimedia Conferencing," IEEE Communication Magazine, 30(5): 38-42, May 1992.   |          |   |       |                                       |                                 |
|   |  | AHUJA et al., "Networking Requirements of the Rapport Multimedia Conferencing System," INFOCOM '88, IEEE, pp. 746-751, 1988.  |          |   |       |                                       |                                 |
|   |  | BISWAS et al., "Distributed Scheduling of Meetings: A Case Study in Prototyping Distributed Application," System Integration, 1992 2 <sup>nd</sup> International Conference.      |          |   |       |                                       |                                 |
| <b>EXAMINER:</b>  |  |   |          | <b>DATE CONSIDERED:</b>                       |       |                                       |                                 |
| <b>EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication. |  |   |          |   |       |                                       |                                 |

|  |  |   |          |   |       |                                       |                              |
|--|--|---|----------|---|-------|---------------------------------------|------------------------------|
| <b>Form PTO-1449</b><br>(Rev. 2-32)  |  | <b>U.S. Department of Commerce</b><br><b>Patent &amp; Trademark Office</b>  |          | <b>Atty. Docket No.</b><br>A8680              |       | <b>Serial No.</b><br>Not Yet Assigned |                              |
| <b>INFORMATION DISCLOSURE STATEMENT</b><br>(Use several sheets if necessary)   |  |   |          | <b>Applicant:</b><br>Lester F. LUDWIG, et al. |       |                                       |                              |
|  |  |   |          | <b>Filing Date:</b><br>November 1, 2000       |       | <b>Group:</b><br>Not Yet Assigned     |                              |
| <b>U.S. PATENT DOCUMENTS</b>   |  |   |          |   |       |                                       |                              |
| Examiner Initial   |  | Document Number   | Date     | Name  | Class | Sub-Class                             | Filing Date (if appropriate) |
|  |  | 4,977,520   | 12/11/90 | McGauhey et al.                               |       |                                       |                              |
|  |  | 4,987,492   | 1/22/91  | Stults, et al.                                |       |                                       |                              |
|  |  | 4,995,071   | 2/19/91  | Weber, et al.                                 |       |                                       |                              |
|  |  | 4,998,243   | 3/5/91   | Kao   |       |                                       |                              |
|  |  | 5,003,532   | 3/26/91  | Ashida, et al.                                |       |                                       |                              |
|  |  | 5,010,399   | 4/23/91  | Goodman, et al.                               |       |                                       |                              |
|  |  | 5,014,267   | 5/7/91   | Tompkins et al.                               |       |                                       |                              |
|  |  | 5,027,400   | 6/25/91  | Baji, et al.                                  |       |                                       |                              |
|  |  | 5,042,062   | 8/20/91  | Lee, et al.                                   |       |                                       |                              |
|  |  | 5,056,136   | 10/8/91  | Smith   |       |                                       |                              |
|  |  | 5,072,442   | 12/10/91 | Todd  |       |                                       |                              |
|  |  | 5,073,926   | 12/17/91 | Suzuki et al.                                 |       |                                       |                              |
|  |  | 5,099,510   | 3/24/92  | Blinken, Jr., et al.                          |       |                                       |                              |
|  |  | 5,130,399   | 7/14/92  | Ikeno et al.                                  |       |                                       |                              |
|  |  | 5,130,793   | 7/14/92  | Bordry, et al.                                |       |                                       |                              |
| <b>FOREIGN PATENT DOCUMENTS</b>  |  |   |          |   |       |                                       |                              |
|  |  | Document  | Date     | Country                                       | Class | Sub-class                             | Translation Yes/No           |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
| <b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>  |  |   |          |   |       |                                       |                              |
|  |  | COHEN et al., "Audio Windows: User Interface for Manipulating Virtual Acoustic Environments," pp. 479-480.  |          |   |       |                                       |                              |
|  |  | COHEN et al., "Audio Windows for Binaural Telecommunication," EIC, Tokyo (10/91)  |          |   |       |                                       |                              |
|  |  | COHEN et al., Design and Control of Shared Conferencing Environments for Audio Telecommunication," Proceedings of the Second Int'l Symposium on Measurement and Control Robotics (ISMCR '92), Tsukuba Science City, Japan, (November 15-19, 1992), pp. 405-412. |          |   |       |                                       |                              |
|  |  | COHEN et al., "Exocentric Control of Audio Imaging in Binaural Telecommunication," IEICE Trans. Fundamentals, Vol. E75-A, No. 2, (February 1992).   |          |   |       |                                       |                              |
|  |  | COHEN et al., "Multidimensional Audio Window Management," Int'l Journal of Man-Machine Studie, Vol. 34:319-336 (1991).  |          |   |       |                                       |                              |
|  |  | COHEN et al., "Multidimensional Audio Windows: Conference, Concerts and Cocktails," Human Factors Society Meeting, SF, CA, pp. 1-15, June 12, 1991.   |          |   |       |                                       |                              |
|  |  | ENSOR et al., "The Rapport Multimedia Conferencing System - Software Overview," Computer Workstation Conference, IEEE, pp. 52-58, 1988.   |          |   |       |                                       |                              |
|  |  | GOPAL et al., "Directories of Networks with Causally Connected Users," IEEE, pp. 1060-1064, 1988.   |          |   |       |                                       |                              |
|  |  | HORN et al., "An ISDN Multimedia Conference Bridge," TENCON '90 - 1990 IEEE Region 10 Conference on Computer and Communication, pp. 853-856, 1990.  |          |   |       |                                       |                              |
| EXAMINER:  |  |   |          | DATE CONSIDERED:                              |       |                                       |                              |
| EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication. |  |   |          |   |       |                                       |                              |

Form PTO-1449  
(Rev. 2-32)

U.S. Department of Commerce  
Patent & Trademark Office

Atty. Docket No.

A8680

Serial No.

Not Yet Assigned

**INFORMATION DISCLOSURE STATEMENT**  
(Use several sheets if necessary)

Applicant:

Lester F. LUDWIG, et al.

Filing Date:

November 1, 2000

Group:

Not Yet Assigned

**U.S. PATENT DOCUMENTS**

| Examiner Initial | Document Number | Date     | Name               | Class | Sub-Class | Filing Date (if appropriate) |
|------------------|-----------------|----------|--------------------|-------|-----------|------------------------------|
|                  | 5,130,801       | 7/14/92  | Yamaguchi          |       |           |                              |
|                  | 5,155,761       | 10/13/92 | Hammond            |       |           |                              |
|                  | 5,157,491       | 10/20/92 | Kassatly           |       |           |                              |
|                  | 5,170,427       | 12/8/92  | Guichard, et al.   |       |           |                              |
|                  | 5,195,086       | 3/16/93  | Baumgartner et al. | 345   | 329       |                              |
|                  | 5,195,087       | 3/16/93  | Bennett et al.     |       |           |                              |
|                  | 5,200,989       | 4/6/93   | Milone             |       |           |                              |
|                  | 5,202,828       | 4/93     | Vertelney et al.   | 345   | 326       |                              |
|                  | 5,202,957       | 4/13/93  | Serrao             |       |           |                              |
|                  | 5,218,627       | 6/8/93   | Corey, et al.      |       |           |                              |
|                  | 5,224,094       | 6/29/93  | Maher et al.       |       |           |                              |
|                  | 5,231,492       | 7/27/93  | Dangi et al.       |       |           |                              |
|                  | 5,239,466       | 8/24/93  | Morgan et al.      |       |           |                              |
|                  | 5,253,362       | 10/12/93 | Nolan et al.       |       |           |                              |
|                  | 5,260,941       | 11/9/93  | Wilder et al.      |       |           |                              |

**FOREIGN PATENT DOCUMENTS**

| Document | Date | Country | Class | Sub-class | Translation Yes/No |
|----------|------|---------|-------|-----------|--------------------|
|          |      |         |       |           |                    |
|          |      |         |       |           |                    |
|          |      |         |       |           |                    |
|          |      |         |       |           |                    |

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

|  |   |
|--|---|
|  | KAMEL, "An Integrated Approach to Share Synchronous Groupware Workspaces," IEEE 1993.   |
|  | KENDALL et al., "Simulating the Cue of Spatial Hearing in Natural Environments," Northwestern University, Evanston, IL 60201.   |
|  | KLEIN, Telekommunikation von Angesicht zu Angesicht 2323 Telcom Report 9 (1986) Sept./Okt., No. 5, Erlangen, W. Germany.  |
|  | KOBAYASHI et al., "Development and Trial Operation of Video Teleconference System," IEEE Globecom, pp. 2060-2063, 1999.   |
|  | LAKE et al., "A Network Environment for Studying Multimedia Network Architecture and Control," (1989 Globecom).   |
|  | LANTZ, An Experiment in Integrated Multimedia Conferencing, Department of Computer Science, Stanford University, Stanford, CA 94305, Dec. 1986.   |
|  | LANTZ et al., Collaboration Technology Research at Olivetti Search California, August 1989.   |
|  | LAUWERS et al., Replicated Architecture for Shared Window Systems: A Critique, (Olivetti Research California) Version of April 1990.  |
|  | LAUWERS et al., Collaboration Awareness in Support of Collaboration Transparency: Requirements for the Next Generation of Shared Windows Systems, (Olivetti Research California) Version of April 1989. |
|  | LEUNG et al., Optimum Connection Paths for a Class of Videoconferences, Department of Information Engineering, the Chinese University of Hong Kong, Shatin, Hong Kong.                                  |

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

|   |  |   |          |   |       |                                       |                              |
|---|--|---|----------|---|-------|---------------------------------------|------------------------------|
| <b>Form PTO-1449</b><br>(Rev. 2-32)   |  | <b>U.S. Department of Commerce</b><br><b>Patent &amp; Trademark Office</b>  |          | <b>Atty. Docket No.</b><br>A8680              |       | <b>Serial No.</b><br>Not Yet Assigned |                              |
| <b>INFORMATION DISCLOSURE STATEMENT</b><br>(Use several sheets if necessary)  |  |   |          | <b>Applicant:</b><br>Lester F. LUDWIG, et al. |       |                                       |                              |
|   |  |   |          | <b>Filing Date:</b><br>November 1, 2000       |       | <b>Group:</b><br>Not Yet Assigned     |                              |
| <b>U.S. PATENT DOCUMENTS</b>  |  |   |          |   |       |                                       |                              |
| Examiner Initial  |  | Document Number   | Date     | Name  | Class | Sub-Class                             | Filing Date (if appropriate) |
|   |  | 5,283,637   | 2/1/94   | Goolcharan                                    |       |                                       |                              |
|   |  | 5,303,343   | 4/12/94  | Ohya et al.                                   |       |                                       |                              |
|   |  | 5,315,633   | 5/24/94  | Champa  |       |                                       |                              |
|   |  | 5,319,795   | 6/7/94   | Hamabe et al.                                 |       |                                       |                              |
|   |  | 5,333,133   | 7/26/94  | Andrews et al.                                |       |                                       |                              |
|   |  | 5,333,299   | 7/26/94  | Kovai et al.                                  |       |                                       |                              |
|   |  | 5,335,321   | 8/2/94   | Harney et al.                                 |       |                                       |                              |
|   |  | 5,345,258   | 9/6/94   | Matsubara et al.                              |       |                                       |                              |
|   |  | 5,351,276   | 9/27/94  | Doll Jr. et al.                               |       |                                       |                              |
|   |  | 5,353,398   | 10/4/94  | Kitahara et al.                               |       |                                       |                              |
|   |  | 5,363,507   | 11/8/94  | Nakayama et al.                               |       |                                       |                              |
|   |  | 5,365,265   | 11/15/94 | Shibata et al.                                |       |                                       |                              |
|   |  | 5,367,629   | 11/22/94 | Chu et al.                                    |       |                                       |                              |
|   |  | 5,373,549   | 12/13/94 | Bales et al.                                  |       |                                       |                              |
|   |  | 5,374,952   | 12/20/94 | Flohr   |       |                                       |                              |
| <b>FOREIGN PATENT DOCUMENTS</b>   |  |   |          |   |       |                                       |                              |
|   |  | Document  | Date     | Country                                       | Class | Sub-class                             | Translation Yes/No           |
|   |  |   |          |   |       |                                       |                              |
|   |  |   |          |   |       |                                       |                              |
|   |  |   |          |   |       |                                       |                              |
|   |  |   |          |   |       |                                       |                              |
|   |  |   |          |   |       |                                       |                              |
| <b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>   |  |   |          |   |       |                                       |                              |
|   |  | MAENO et al., Distributed Desktop Conferencing System (MERMAID) Based on Group Communicatoin Architecture, The Transactions of the Institute of Electronics, Information and Comm. Engineers E74 (1991) Sept., No. 9, Tokyo, JP |          |   |       |                                       |                              |
|   |  | MARTENS, "Principal Components Analysis and Resynthesis of Spectral Cues to Perceived Directoin," Proceedings of the 1987 Int'l Computer Music Conference, Northwestern University, Evanston, IL 60201                          |          |   |       |                                       |                              |
|   |  | MASAKI et al., "A Desktop Teleconferencing Terminal Based on B-ISDN: PMTC," NTT Review, 4(4) :81-85, 1992   |          |   |       |                                       |                              |
|   |  | NG et al., Systems Integration '90, (April 23-26, 1990).  |          |   |       |                                       |                              |
|   |  | NUNOKAWA et al., "Teleconferencing Using Stereo Voice and Electronic OHP," IEEE, 1988.  |          |   |       |                                       |                              |
|   |  | OHMORI et al., "Distributed Cooperative Control for Sharing Applications Based on Multipaty and Multimedia Desktop Conferencing System," IEEE, 1992.  |          |   |       |                                       |                              |
|   |  | PATE, "Trends in Multimedia Applications and the Network Models to Support Them," Globecom's 90: 1990.  |          |   |       |                                       |                              |
|   |  | PERKINS, "Spider: An investigation in collaborative technologies and their effects on network performance".   |          |   |       |                                       |                              |
|   |  | RAMANATHAN et al., Optimal Communication Architectures for Multimedia Conferencing in Distributed Systems, Multimedia Laboratory Dept. of Computer Science and Engineering, University of San Deigo, La Jolla, CA.              |          |   |       |                                       |                              |
| <b>EXAMINER:</b>  |  |   |          | <b>DATE CONSIDERED:</b>                       |       |                                       |                              |
| <b>EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication. |  |   |          |   |       |                                       |                              |

|  |  |   |          |   |       |                                       |                              |
|--|--|---|----------|---|-------|---------------------------------------|------------------------------|
| <b>Form PTO-1449</b><br>(Rev. 2-32)  |  | <b>U.S. Department of Commerce</b><br><b>Patent &amp; Trademark Office</b>  |          | <b>Atty. Docket No.</b><br>A8680              |       | <b>Serial No.</b><br>Not Yet Assigned |                              |
| <b>INFORMATION DISCLOSURE STATEMENT</b><br>(Use several sheets if necessary)   |  |   |          | <b>Applicant:</b><br>Lester F. LUDWIG, et al. |       |                                       |                              |
|  |  |   |          | <b>Filing Date:</b><br>November 1, 2000       |       | <b>Group:</b><br>Not Yet Assigned     |                              |
| <b>U.S. PATENT DOCUMENTS</b>   |  |   |          |   |       |                                       |                              |
| Examiner Initial   |  | Document Number   | Date     | Name  | Class | Sub-Class                             | Filing Date (if appropriate) |
|  |  | 5,375,068   | 12/20/94 | Palmer et al.                                 |       |                                       |                              |
|  |  | 5,379,374   | 1/3/95   | Ishizaki et al.                               |       |                                       |                              |
|  |  | 5,382,972   | 1/17/95  | Kannes  |       |                                       |                              |
|  |  | 5,384,598   | 1/24/95  | Rodriguez et al.                              |       |                                       |                              |
|  |  | 5,384,772   | 1/24/95  | Marshall                                      |       |                                       |                              |
|  |  | 5,392,223   | 2/21/95  | Caci  |       |                                       |                              |
|  |  | 5,392,346   | 2/21/95  | Hassler et al.                                |       |                                       |                              |
|  |  | 5,404,435   | 4/4/95   | Rosenbaum                                     |       |                                       |                              |
|  |  | 5,408,526   | 4/18/95  | McFarland, et al.                             |       |                                       |                              |
|  |  | 5,408,662   | 4/18/95  | Katsurabayashi                                |       |                                       |                              |
|  |  | 5,422,883   | 6/6/95   | Hauris et al.                                 |       |                                       |                              |
|  |  | 5,432,525   | 7/11/95  | Maruo et al.                                  |       |                                       |                              |
|  |  | 5,444,476   | 8/22/95  | Conway  |       |                                       |                              |
|  |  | 5,471,318   | 11/28/95 | Ahuja et al.                                  |       |                                       |                              |
|  |  | 5,473,679   | 12/5/95  | La Porta et al.                               |       |                                       |                              |
| <b>FOREIGN PATENT DOCUMENTS</b>  |  |   |          |   |       |                                       |                              |
|  |  | Document  | Date     | Country                                       | Class | Sub-class                             | Translation Yes/No           |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
| <b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>  |  |   |          |   |       |                                       |                              |
|  |  | RANGAN et al., "Software architecture for integration of video services in the etherphone system," IEEE J. on Selected Areas in Comm., 9(9) :1395-1404, Dec. 91.  |          |   |       |                                       |                              |
|  |  | RANGAN et al., "A Window-Based Editor for Digital Video and Audio," System Sciences, 1992 Hawaii Int'l Conference (1992).   |          |   |       |                                       |                              |
|  |  | SAKATA, "B-ISDN Multimedia Workstation Architecture," IEEE, 1993.   |          |   |       |                                       |                              |
|  |  | SAKATA et al., "Development and Evaluation of an In-House Multimedia Desktop Conference System," NEC Research & Development, no. 98, pp. 107-117, July 1990.  |          |   |       |                                       |                              |
|  |  | STEFIK et al., "Beyond the Chalkboard: Computer Support for Collaboration and Problem Solving," Communications of the ACM, Vol. 30, No. 1, Jan. 1987.   |          |   |       |                                       |                              |
|  |  | VIN et al., Hierarchical Conferencing Architectures for Inter-Group Multimedia Collaboration, Multimedia Laboratory Department of Computer Science and Engineering University of California at San Diego, La Jolla. |          |   |       |                                       |                              |
|  |  | VIN et al., Multimedia Conferencing in the Etherphone Environment, Computer Magazine, Vol. 24, Issue 10, pp. 69-79, 1991.   |          |   |       |                                       |                              |
| EXAMINER:  |  |   |          | DATE CONSIDERED:                              |       |                                       |                              |
| EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication. |  |   |          |   |       |                                       |                              |

|  |  |   |          |   |       |                                       |                              |
|--|--|---|----------|---|-------|---------------------------------------|------------------------------|
| <b>Form PTO-1449</b><br>(Rev. 2-32)  |  | <b>U.S. Department of Commerce</b><br><b>Patent &amp; Trademark Office</b>  |          | <b>Atty. Docket No.</b><br>A8680              |       | <b>Serial N .</b><br>Not Yet Assigned |                              |
| <b>INFORMATION DISCLOSURE STATEMENT</b><br>(Use several sheets if necessary)   |  |   |          | <b>Applicant:</b><br>Lester F. LUDWIG, et al. |       |                                       |                              |
|  |  |   |          | <b>Filing Date:</b><br>November 1, 2000       |       | <b>Group:</b><br>Not Yet Assigned     |                              |
| <b>U.S. PATENT DOCUMENTS</b>   |  |   |          |   |       |                                       |                              |
| Examiner Initial   |  | Document Number   | Date     | Name  | Class | Sub-Class                             | Filing Date (if appropriate) |
|  |  | 5,475,421   | 12/12/95 | Palmer et al.                                 |       |                                       |                              |
|  |  | 5,485,504   | 1/16/96  | Ohnsorge                                      |       |                                       |                              |
|  |  | 5,491,695   | 2/13/96  | Meagher et al.                                |       |                                       |                              |
|  |  | 5,506,954   | 4/9/96   | Arshi et al.                                  |       |                                       |                              |
|  |  | 5,515,491   | 5/7/96   | Bates et al.                                  |       |                                       |                              |
|  |  | 5,526,024   | 6/11/96  | Gaglianella et al.                            |       |                                       |                              |
|  |  | 5,550,966   | 8/27/96  | Drake et al.                                  |       |                                       |                              |
|  |  | 5,553,222   | 9/3/96   | Milne et al.                                  |       |                                       |                              |
|  |  | 5,561,736   | 10/1/96  | Moore et al.                                  |       |                                       |                              |
|  |  | 5,565,910   | 10/15/96 | Rowse et al.                                  |       |                                       |                              |
|  |  | 5,581,702   | 12/3/96  | McArdle                                       |       |                                       |                              |
|  |  | 5,590,128   | 12/31/96 | Maloney, et al.                               |       |                                       |                              |
|  |  | 5,594,495   | 1/14/97  | Palmer et al.                                 |       |                                       |                              |
|  |  | 5,602,580   | 2/11/97  | Tseng   |       |                                       |                              |
|  |  | 5,608,653   | 3/4/97   | Palmer et al.                                 |       |                                       |                              |
|  |  | 5,689,553   | 11/18/97 | Ahuja et al.                                  |       |                                       |                              |
|  |  | 5,864,844   | 1/99     | James et al.                                  | 707   | 4                                     |                              |
| <b>FOREIGN PATENT DOCUMENTS</b>  |  |   |          |   |       |                                       |                              |
|  |  | Document  | Date     | Country                                       | Class | Sub-class                             | Translation Yes/No           |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
| <b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>  |  |   |          |   |       |                                       |                              |
|  |  | WATABE et al., "A Distributed Multiparty Desktop Conferencing System and Its Architecture," IEEE, 1991.                 |          |   |       |                                       |                              |
|  |  | WATABE et al., "Distributed Desktop Conferencing System with Multiuser Multimedia Interface," IEEE, 1991.               |          |   |       |                                       |                              |
|  |  | WEISS, Desk Top Video Conferencing - An Important Feature of Future Visual, SIEMENS AG - Munich - West Germany.         |          |   |       |                                       |                              |
|  |  | ZELLWEGGER et al., "An Overview of the Etherphone System and Its Applications," Computer Workstations Conference, 1988. |          |   |       |                                       |                              |
|  |  |   |          |   |       |                                       |                              |
| EXAMINER:  |  |   |          | DATE CONSIDERED:                              |       |                                       |                              |
| EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication. |  |   |          |   |       |                                       |                              |